“FARMERS’ PERCEPTION TOWARDS STORAGE FACILITY FOR AGRICULTURAL COMMODITIES: A STUDY OF MAHARASHTRA STATE”

A PhD Synopsis

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Introduction

Agriculture is the backbone of the Indian economy. In spite of the speedy pace of development made on industrial front, farming continues to play a leading role in accelerating the economic development. The two basic elements of agriculture are production and marketing of agricultural commodities. Marketing of agricultural commodities is as important as production itself. Agricultural marketing involves the movement of food and raw materials from the farmers to the consumers. For this, it requires a transportation, grading, storage and warehousing and marketing system, which, in turn, depends upon the organization of market, its structure and conduct. The market structure, conduct and performance are causal and sequential phenomenon of interaction on the market.

Agricultural Marketing is one of the factor for the “second generation” of green revolution problems. Indian Marketing is undergoing a significant transformation because of economic liberalization and globalization. The achievement of marketing strategies and macro-economic policies in developing countries are influenced by the accessibility of infrastructure development, which plays a significant part in present era of marketing. at present, we are experiencing a significant transformation of agricultural sector. In precedent, agriculture was driven by bid, at present it is driven by command using technological interventions in the marketing procedure. However, we can articulate that agriculture will be driven by technology in the future in order to provide potential technological opportunities and take in benefits. Modern Information Technology (IT) revolution, has helped in not only market information system but also has altered the character of market functioning overall by making several mediators redundant, lowering the cost of information, reducing the transaction cost and increasing the competition.

Agriculture sector has been the backbone of the Indian economy and it will continue to remain so for a longer period. Indian agriculture is a critical economic activity, the share of agriculture sector in gross domestic product (GDP) was 15.2 percent in eleventh five year plan and it has further declined to 13.9 percent in year 2013-14. While agriculture sector still accounts for 54.6 percent total employment as declared in

census 2011. There has been a continuous decline in the absolute number of cultivators, which is unusual, from 127.3 million in 2001 to 118.7 million in 2011. This decline in number of farmers indicates the shift of population from farm to non farm sectors. India ranks 7th in the world for land coverage and 2nd in the world in terms of cultivable land after USA also India ranks 2nd in the world in terms of economically active population, Out of the total population of the world India has 15 percent economically active population. In terms of economically active population in Agriculture sector India ranks second in the world after China i.e. 20.4 percent of the worlds economically active population in agriculture sector was from India. According to 2012 estimates India is a second largest producer of wheat after it's neighbor China, second largest producer of rice, groundnut and ranks first in pulses production. Although India's position in terms of agricultural production is very much better but still food wastage is one of the main factor which contribute to uneven availability of food grains and it's loss.

Review of Literature

This section provides an overview of previous research and introduces the framework for the study that comprises the main focus of the research. The reviews has been taken from books, journals, magazines, reports focuses on farmers problems, agriculture business, agricultural storage etc.

T. Haque (2015) had stated in his article in the Indian journal of agricultural marketing that, the liberality of market forces, based on the laws of demand and supply may have to be encouraged in the long run, various defects in the present agricultural marketing structure would require adequate government intervention in the interest of both producers and consumers, at least in the short and medium terms. Also some unscrupulous merchants can take the small, albeit unorganized farmers to ransom, if there is no price protection by the government. Given the country's poor administrative infrastructure and governance, check on malpractices by merchants becomes all the more complicated.

Vaswani, L.K., Aithal, R., Pradhan, D., Sridhar, G., (2005) explained in the article Rural marketing in the development paradigm that, farmers' empowerment is essential to

overcome the extreme unevenness of relation between a number of rural producers and few middlemen, and in turn enhance producers' share in the consumer rupee. The article also enlightens a need to help rural producers to step up further investments in their venture, be it the agriculture or rural non-farm sector. Towards this end, rural enterprises need consolidation to respond to emerging needs of rural and urban markets on competitive and/or comparative advantage. In an Indian context such consolidation requires appropriate marketing interventions with the objective of minimizing market resistance to rural products, along with maximizing market orientation of rural enterprises.

Joachim von Braun (2005) in the seminar at university of Helsinki revealed that the resource-poor farmers in changing market and trade environments. The small scale farmers are at the center of concerns in the era of globalization because of they are the largest employment and small businesses group among the world's poor. Their businesses utilize mostly local resources and face local constraints, which are extremely affected by global economic changes. Such changes are hard for small farmers to project and assess. As a result, millions of small farmers and their families feel anxiety about the future.

P. Satish (2007) in his article rural infrastructure growth: an overview found that, ample infrastructure move up productivity and lowers production costs, but it has to expand fast enough to accommodate development. As the Kerala's economy was a relatively closed economy until mid-1990s. but production of commercial agricultural commodities such as coconut, rubber, tea, coffee, spices, etc. was fairly profitable even without much improvement in productivity and value addition because of protected internal market and prospects for exports.

According to Dr Tripathi, S. K. (2015) lack of storage infrastructure causes heavy losses of food grains, pulses, oilseeds, fruits and vegetables. Seasonal fluctuations in prices are aggravated in the absence of these facilities.

Shweta Saini and Marta Kozicka (2014) had analyzed in the working paper of Evolution and Critique of Buffer Stocking Policy of India that the net production of food grains and

per capita availability of food grains in India. The study estimated that even though the food grain production shows increasing trend, the per capita availability of food grains is decreasing continuously due to gaps in storage and public distribution system.

Anna Wozniak Andrzejuk (2012) explained in his article published in the Scientific journal Warsaw university of life sciences that, in spite of having a strong support from the EU in the form of monetary aid, the level of involvement of family farms in the producer organizations in Poland is still not satisfactory. This condition will hamper the development of fruit and vegetable producers and their bargaining power abilities. If the wellbeing of family farms is to be preserved, fostering diversity and improved conditions of life in the countryside, individual farmers should not only commit to the producer organizations, but go even further and allow the organizations to merge into stronger entities in order to compete with other members of the supply chain.

According to E. Kharaishvili, G. Erkomaishvili, M. Chavleishvili (2015) Farmers are experiencing difficulties in realization of products on local and regional markets. small farmers have almost no access to privileged agricultural loans. It's complicated for them to participate in the programs of preferential loans, which require co-funding or real estate collateral. While preferential agricultural loans are more or less accessible for large farmers, it's difficult for small farmers to compete with large farmers. Medium farmers have less access to the qualified labor. It's advisable to establish new processing factories, where raw materials will be supplied by farmers. The programs of business loans and grants for small farmers need to be carried out.

Summary of the Literature review

Most of the studies points out numerous problems in marketing of agricultural produce i.e. problems in grading, market infrastructure, storage, pricing etc. These studies also put some facts regarding the procurement and supply of agricultural commodities in India as well as in the other countries. All the above studies indicate the importance of agricultural commodities as well as focus on the need to find out the problems behind the slow agricultural growth. The present study will focus on the problems faced by farmers in agriculture business as well as storage of agricultural commodities.

Objectives of the study

1) To study the problems faced by farmers towards production of agricultural commodities in Maharashtra.
2) To study the problems faced by farmers towards storage facility of agricultural commodities in Maharashtra.
3) To find out the potential for storage facilities of agricultural commodities in Maharashtra.
4) To examine the present status and prospects of agricultural storage facility in Maharashtra.
5) To find out the awareness of farmers regarding government schemes about storage and warehousing of agricultural commodities.
6) To study the benefits of modern storage facilities.

Hypotheses:

1. H0 : Age of the respondent does not affect his/her perception towards Storage and warehousing.

   H1 : Age of the respondent affect his/her perception towards Storage and warehousing.
2. H0: Farm size of the respondent does not affect his/her perception towards Storage and warehousing.

   H2: Farm size of the respondent affect his/her perception towards Storage and warehousing.
3. H0: Education level of the respondent does not affect his/her awareness towards Storage and warehousing schemes

   H3: Education level of the respondent affect his/her awareness towards Storage and warehousing schemes.
4. H0: There is no linkage between the crop produce & storage facility of agricultural commodity

   H4: There is a linkage between crop produce and storage facility of agricultural commodity.

Methodology to be adopted

The present study will be conducted in state of Maharashtra. Multi-stage random sampling technique will be involved in the selection of the respondents for the study. There are 35 districts in the Maharashtra state which consists of agriculture sector (Excluding Mumbai & Navi Mumbai) and it is mainly divided into six revenue divisions i.e. Mumbai, Pune, Aurangabad, Nashik, Amravati & Nagpur. Three villages will be selected from each division randomly.

The sample size will be determined by using Krejcie & Morgan, 1970 formula as follows

$$S = \frac{X^2 NP(1-P)}{d^2\,(N-1) + X^2 P\,(1-P)}$$

Where:
S = Required Sample size
X = Z value (e.g. 1.96 for 95% confidence level)
N = Population Size
P = Population proportion (assumed to be 50%)
d = Degree of accuracy (3.5%), It is margin of error

$$S = \frac{1.96^2(13698965)(0.5)(1-0.5)}{0.035^2\,(13698965-1) + 1.96^2(0.5)\,(1-0.5)}$$

S = 784

Three villages will be selected from each division randomly and respondent farmers will be selected from each village based on farmer's population in the village in proportion to the above sample size.

Importance of study

The need for investment in agriculture sector is increasing due to a rising world population and changing food preferences of the growing middle class in emerging markets toward higher value foods. According to estimates, demand for food will

increase by 70 per cent by 2050, and at least $80 billion annually in investments will be needed to meet this demand, most of which is expected to come from the private sector.

The Indian food industry accounts for less than 14 per cent of the organized retail trade but consumers spend almost 50 per cent of their budget on food items. This increased level of expenditure is due to post-harvest losses at farm level as well as during movement and storage. India is known as an agrarian country, where almost 70 percent of the population depends on agriculture for livelihood. India has moved away from chronic food deficit to a surplus. India's food grain production is now (2013-14) at around 264.77 million ton. According to 2013 estimates India has 297 Million Hectare land of which 156 Million hectare was arable land, the arable land is continuously decreasing due to urbanization where as the population and need for food is continuously increasing.

A report by the Food and Civil Supplies Ministry, Government of India, reveals that the total preventable post-harvest losses of food grains at about 20 million tons a year, which was nearly 10 per cent of the total production which is equivalent to total food grain production of Australia. Thus, the crusade for higher production of food grain as well as lowering the storage losses has to continue with increased efforts. For minimizing the losses there is a need to create agriculture supply chain infrastructure, Indian government continuously trying to achieve this goal through its phased program for enhancing storage capacity and quality of agriculture food, ironically on the other side there is very less adoption of modified storage practices by Indian farmers, which lead to a big hurdle in food security, Hence there is a need to find out the farmers problems and prospects regarding this sector.

. Therefore it is necessary problem to study i.e. **"FARMERS' PERCEPTION TOWARDS STORAGE FACILITY FOR AGRICULTURAL COMMODITIES: A STUDY OF MAHARASHTRA STATE"** for its proper growth.

Proposed work Plan/ Formulation and Structure of Study:

The proposed structure of the study undergoes through the following chapter scheme

1. Introduction
2. Overview of production and storage of agricultural commodities in Maharashtra.
3. Study of problems in agriculture production in India.

4. Data analysis and data interpretation
5. Findings, Suggestions & Conclusion

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